

ABSTRACT OF THE DISCLOSURE

A viscoelastic foam is provided having an amine-based polyol system to impart strength, recoverability and endurance to the foam, and an appropriately selected trifunctional non-amine-based polyol system to provide flexibility to the foam. The combination of amine-based and non amine-based polyols provides a viscoelastic semi-rigid foam with excellent impact and recovery properties, recovering to substantially 100% of its initial volume and shape following an impact, yet with high rigidity and stiffness so that it is effective at absorbing high as well as low-energy impacts. A method of making the above viscoelastic foam is also provided. In a preferred embodiment, the foam is made using an allophanate-modified MDI prepolymer in order to provide the isocyanate in liquid form at standard temperature and pressure in order to simplify the production of the invented viscoelastic foams.